Gemini Rising, Moon in Apollo: Attitudes on the Relationship Between Art and Technology in the US, 1966-71

Edward A. Shanken
Department of Art & Art History, Duke University
Email: giftwrap@acpub.duke.edu

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In the history of human thinking the most fruitful developments frequently take place
at those points where two different lines of thought meet.

-Werner Heisenberg[2]

The pairing of the terms art and technology, and the discussion about their relationship is ancient. But after the second World War, and following C.P. Snow's identification in 1951 of the growing breach between "the two cultures," the ongoing debate about the relationship between art and technology reached a higher pitch, with unprecedented cultural resources dedicated to the idea of joining them. This discourse was clearly historicized in the great number of exhibitions on art and technology that took place internationally between 1966-72. During this time there were at least ten major museum exhibitions on this theme in the US alone.[3]

This essay considers a number of statements by some central figures in the discourses about art and technology in the 1960s: artists John Cage and Robert Rauschenberg, electrical engineer Billy Kluver, and art historians Pontus Hulten and Jack Burnham. Its goal is to bring into relief some of the buried presumptions and ideological underpinnings that motivated attempts to join art and technology during this volatile period.

The following statement by American composer John Cage exemplifies some of the prevalent attitudes held by artists toward art and technology in the 1960s. These comments were made in the context of his participation in an historic series of artist-engineer collaborations in 1966, *Nine*

Evenings: Theatre & Engineering, organized by Rauschenberg and Kluver in New York City:

> I want to remove the notion of the separation between the artist and the engineer. I think that the engineer is separate from other people simply because of his very highly specialized knowledge. If the artist can become aware of the technology, and if the engineer can become aware of the fact that the show must go on, then I think that we can expect not only interesting art, but we may just very well expect an interesting change in the social order. The most important aspect of this is the position of the engineer as a possible revolutionary figure. And it may very well come [to pass] as a result of the artists and engineers collaborating. Because the artists, for years now, have been the repositories of revolutionary thought. Whereas the engineers, in their recent history, have been employees of the economic life. But in relating to the artists, they become related to a revolutionary factor.[4]

According to Cage, the artist was the progenitor of a revolutionary heritage who, through collaborations between artists and engineers, would transfer this revolutionary element to the technical servants of commerce and industry. Cage seemed to believe that this collaboration might contribute to transforming the social order. Yet, even while claiming to remove the separation between artists and engineers, the composer oversimplified the categorical distinctions between them and reduced the characteristics of each to a caricature. Cage unabashedly celebrated the artist while condescending to the engineer, and never explained *how* this transfer of revolutionary spirit from the one to the other would come about, to say nothing of his elision of the role of artists as employees of economic life.

Cage does, however, express what came to be a common sentiment: that the world was out of balance, and that some kind of revolution was eminent. All signs appeared to point in that direction, with the heating up of the Cold War, made visible in the space race spanning from the Sputnik's launch (October 4, 1957) to the Apollo XI lunar landing (July 20, 1969), the installation of the Berlin Wall (August, 1961), the Bay of Pigs (1962), and the escalating US engagement in and violence of the Viet Nam War during the Johnson and Nixon administrations. While the ideological conflict between capitalism and communism was the political battleground of this crisis, technology was the means by which the so-called American way of life would be preserved. Technology became inseparable from the growing "military-industrial complex" that President Eisenhower had warned of in his 1961 farewell address.[5] In this way, international relations, technology, and capitalist industry constituted an allied ideological front in America. And artists like Cage, sought to counteract what they perceived as the deleterious effects of technology - such as the destructiveness of war and industrial pollution - by appropriating it for beneficent aesthetic purposes which would infiltrate engineering and reform industry.

Artists like Cage were not alone in holding such humanistic views on art and technology. Swedish electrical engineer Dr. Billy Kluver, a laser researcher at Bell Laboratories, began collaborating with artists including Jean Tinguely and Jasper Johns in the late 1950s. In addition to organizing the aforementioned *Nine Evenings*, in 1966 Kluver also co-founded Experiments in Art and Technology (E.A.T.), a non-profit organization that facilitated artist-engineer collaborations internationally.

In a 1997 interview, Kluver agreed with Cage's position of 1966, even if he considered it "tame" compared to his own much more enigmatic point of view.[6] In 1968, the engineer remarked that, "Art and technology go well together in a world run by people who consider boredom the greatest

virtue."[7] While the meaning of this statement is ambiguous, thirty years later Kluver explained that, as a result of their training, engineers are "locked into a very restricted way of looking at the world," which prevents them from "using their brains to change the environment, to make a more human environment, as they should."[8] He has consistently maintained that artist- engineer collaborations might yield "technology [that] is for pleasure, variety, change, respect for individual choice and human relationships."[9]

At the same time, Kluver does not believe in art and technology as a unified concept because, in his opinion, each field is a separate and distinct entity, the protocols and goals of which are not translatable, much less compatible. When asked about the utopian ideal of fusing art and technology, which characterized Cage's view (and much other discourse on the subject), Kluver stated in 1968, "I don't know what John's feelings are about Utopia. To me it has always sounded like a pretty dull place."[10]

For Kluver, it is the *difference* between art and technology that makes the result of their interaction worthwhile, while the idea of unifying them is a prescription for boredom. Such a paradoxical position delimits the poles - or rather, the seamless continuity - of belief and skepticism that coexist at this conflicted cross-roads of art and technology.

In the program notes that Kluver wrote for *Nine Evenings*, he emphasized the importance of improving the status and respectability of artists in society, and of the benefits resulting from "feedback to industry from the interaction between artists and engineers."[11] Kluver came to believe that he "could change technology, and that art was a vehicle for that."[12] There is no better proof of his commitment to this idea than the fact that in 1968 he left his prestigious and lucrative job at Bell Labs in order to pursue that quest full-time as President of E.A.T.

For the November 1, 1967 issue of *E.A.T. News*, Kluver and Rauschenberg collaborated on a statement that expressed the "urgency we feel about the need for a new awareness and sense of responsibility" regarding the relationship between art and technology, and the long-range goals of E.A.T.:

> MAINTAIN A CONSTRUCTIVE CLIMATE FOR THE RECOGNITION OF THE NEW TECHNOLOGY AND THE ARTS BY A CIVILIZED COLLABORATION BETWEEN GROUPS UNREALISTICALLY DEVELOPING IN ISOLATION.
>
> ELIMINATE THE SEPARATION OF THE INDIVIDUAL FROM TECHNOLOGICAL CHANGE AND EXPAND AND ENRICH TECHNOLOGY TO GIVE THE INDIVIDUAL VARIETY, PLEASURE AND AVENUES FOR EXPLORATION AND INVOLVEMENT IN CONTEMPORARY LIFE.
>
> ENCOURAGE INDUSTRIAL INITIATIVE IN GENERATING ORIGINAL FORETHOUGHT INSTEAD OF A COMPROMISE IN AFTERMATH, AND PRECIPITATE A MUTUAL AGREEMENT IN ORDER TO AVOID THE WASTE OF A CULTURAL REVOLUTION.[13]

The authors asserted that it was unrealistic for art and technology to develop separately. But wouldn't that contradict Kluver's belief in the importance of their distinctness? Moreover, wouldn't a "civilized collaboration" be a prescription for ennui? In other words, boring? Perhaps an "uncivilized collaboration" - such as pirate radio and television, or other guerilla art tactics - would

provide more of the "variety, pleasure, and avenues for exploration..." that Rauschenberg and Kluver sought. As Jasia Reichardt, curator of the 1968 British exhibition *Cybernetic Serendipity* argued, "artists like Takis, Tinguely,... Paik [and others] ... have consistently made use of technology without the help of any specific organization."[14]

Kluver and Rauschenberg's conclusion is especially striking in that it reveals a belief, or veiled threat, that if industry did not change its ways, there would inevitably be a revolution, and that would be "wasteful" - the antithesis of efficient engineering. In this sense, their statement can be interpreted as transforming Cage's idea of the artist as revolutionary into the idea of the artist as the key to efficiency and the prevention of revolution. Reversing the terms of the official US ideological front referred to earlier, in which technology and capitalist industry were allied against the perceived Soviet threat, Kluver and Rauschenberg allied art and technology with the ideological concerns percolating amongst Leftist intellectuals and artists (the sexual revolution and the anti- war, civil rights, and environmental movements) against the perceived repression and alienation of the military-industrial-complex.

While *Nine Evenings* and E.A.T. represent the more self-organizing, grass-roots end of the art and technology spectrum, the 1968 exhibition, *The Machine: As Seen at the End of the Mechanical Age*, represents its measured, institutional end. Swedish art historian K.G. Pontus Hulten, who had organized a number of important international exhibitions on kinetic art and other experimental media since the 1950s, curated this large-scale exhibition of art and technology at the Museum of Modern Art (MOMA) in New York.[15] A broad survey, including work by some 100 artists, *The Machine* represented the historical intersections of art and technology, from Leonardo DaVinci's drawings of visionary flying machines (c. 1485-90) to a commissioned competition amongst contemporary artist-engineer collaborations, publicized and overseen by E.A.T.[16] By endorsing this interdependent history with MOMA's seal of approval, Hulten sought, in part, to overcome popular prejudices against the use of technological media in art.

Hulten's introductory essay in the distinctive, steel-clad catalog, offers an example of the "conflicted" (his word) views regarding the relationship between art, technology, and the human, representative of the late 1960's. On the last page he wrote:

> From the mid-'fifties on, ... [artists] have devoted themselves to an attempt to establish better relations with technology. Standing astonished and enchanted amid a world of machines, these artists are determined not to allow themselves to be duped by them. Their art expresses an optimistic view toward man, the creator of machines, rather than toward technology as such. They lead us to believe that in the future we may be able to achieve other, more worthy relations with machines. They have shown that while different aspects of our relations to machines may conflict, they are not necessarily contradictory. Not technology, but our misuse of it, is to blame for our present predicament.[17]

If Hulten's optimism seems unwarranted today because of its faith in human control over technology, it is equally remarkable for the self-consciousness of the author's avowed conflicted "relations with machines," and the apparent sincerity of his endeavor. Several paragraphs later, Hulten rejected the "frightening... notion that modern technology has an evolution of its own, which is uncontrollable and independent of human will." Perhaps the quickness with which the curator dismissed this menacing possibility reflected his anxiety about its real potential threat.

In these passages Hulten took a position at odds with the almost apocalyptic technological determinism characteristic of Martin Heidegger, one of the most critical mid-century commentators on the relationship between art and technology. In his 1953 essay, *The Question Concerning Technology* (first published in 1954), the German philosopher wrote, "Man stands so decisively in subservience to the challenging-forth (*Herausfordern*) of [technological] enframing (*Gestell*) that he ... fails to see himself as the one spoken to..." He continued, "The threat has already afflicted man in his essence."[18] But just when the fate and free will of humankind appear to be reduced to "standing reserve," (*Bestand*) by a technological mode of ordering the world, it turns out, according to Heidegger, that the dual nature of *techne* always has embodied art. Complementing the challenging-forth of technology, the bringing forth (*Her-vor-bringen*) of *poiesis* offers an alternative way of knowing and being. Thus, by a quasi-mystical feat of etymological association and dissociation (that ironically recalls the classical stage device of *deus ex machina*) Heidegger concluded that art offers salvation from the "darkening world" of "technological enframing."[19]

Anticipating, though much more pessimistic than media theorist Marshall McLuhan, Heidegger believed that technology had infected humanity at its "essence," becoming part of, and inseparable from, human consciousness. For curator Hulten, the human and the technological remained more highly autonomous entities, with the human remaining firmly in control. Though earlier in his essay he enumerated many of the historically and potentially destructive aspects of machines, ultimately the art historian believed that the artist's (and curator's) "unduped" use of technology supported progressive concerns, and provided inspiration for loftier human-machine relations.

Heidegger's reflections on the relationship between art and technology are insightful. Paralleling the process of technological enframing he describes, so artists have theorized that art enters into and transforms humanity at its essence, on the level of consciousness. As British artist and self-proclaimed "concept engineer" John Latham has explained in his concept of "time base," this effect of art occurs over variable frames of time. This theory postulates that the long-term integration of aesthetic concepts into consciousness is different from the short-term ways in which other types of learning become incorporated into behavior, a theory he put into practice by founding the Artists Placement Group (APG) in 1966. The mission of the APG was to place artists as observers and consultants within large corporations, where their unique vision and problem-solving capabilities could contribute to the transformation of industry, and ultimately, society in general.[20]

While E.A.T. and the APG sought civilized collaborations between artists and industry, the goals of artists and industry are not always commensurable, sometimes precluding the very possibility of collaboration. Such was the case of Belgian artist Jean Toche and American Motors Corporation. In 1969, the same year that Toche ridiculed and protested the exhibition "New York Painting and Sculpture: 1940-1970" in an action in front of the Metropolitan Museum of Art, art historian Jack Burnham invited him to exhibit a work of art in the exhibition *Software, Information Technology: Its New Meaning for Art* at the Jewish Museum in 1970.

Software manifested the convergence of information technology, experimental art practice, and structuralist theory. The exhibition explicitly challenged distinctions between art and non-art, and functioned as a testing ground for public interaction with the ideas and technologies of the impending information age, including hypertext, online data systems, and artificial intelligence. Moreover, since *Software* presented such diverse artists as Joseph Kosuth, Hans Haacke, and Sonia Sheridan, and non-artists like hypertext inventor Ted Nelson, and intelligent environment

architect Nicholas Negroponte, it implicitly problematized conventional distinctions between "art and technology" and other experimental art media and technological invention.[21]

Toche's piece for *Software* was to have been comprised of a "walk-in tunnel of air contaminated by noxious - but non-poisonous - gas, whose daily pollution level would tally with the city's."[22] When the artist was informed that a major US automobile manufacturer was the primary sponsor of the exhibition, he withdrew from the show, claiming that "it would be hypocritical for him to contribute a work condemning air pollution when the show's chief backer, American Motors, is [in Toche's words] 'one of the major contributors to air pollution.'"[23]

Software curator Jack Burnham's response to Toche's pull-out is also notable. He replied that "all progressive things are accomplished with the aid of the System, whether [he] likes it or not. If Toche withdraws from the show, he's missing a big opportunity to use the inherent energy of the system - American Motors and the Museum - to make his point."[24] Later, in an interview with artist Willoughby Sharp, a founder of the Art Worker's Coalition of which Toche was a member, Burnham noted that during this period, a number of curators made explicit their sources of exhibition funding, so that,

> the artist is put in the compromising position of making pieces with money whose source he knows. Somehow the fact that the Guggenheim Foundation's grant come[s] from the copper mines of South America doesn't bother artists half so much as openly working with American Motors money."[25]

It remains inexplicable why such a subtle thinker as Burnham, who intentionally put artists in a "compromising position," then argued against the withdrawal from his show of the only artist who reacted explicitly against the practices of its corporate sponsor and, in effect, against the system by which art is exhibited to the public.

On the question of corporate sponsorship, Maurice Tuchman, who initiated the remarkably ambitious Art and Technology Program at the Los Angeles Museum of Art, explained that,

> [We] expected resistance from artists ... on "moral" grounds - opposition, that is, to collaborating in any way with the temples of Capitalism, or, more particularly, with militarily involved industry. This issue never became consequential in terms of our program, perhaps because the politically conscious artist saw himself, to speak metaphorically, as a *Trotsky writing for the Hearst Empire*. However, I suspect that if Art and Technology were beginning now [in 1971] instead of 1967, many of the same artists would not have participated.[26]

While art as a form of protest, and protests by artists against the institutional constraints that bore down upon their practice, were not uncommon, Toche was rare in boycotting an exhibition on "'moral' grounds."[27] But his example raises many important questions. Would it have been possible for Toche's piece to function, as Tuchman suggested, like "Trotsky writing for the Hearst Empire" in an American Motors-sponsored exhibition? Or would its critical message have benefited the sponsor, by making automobile manufacturer appear to be concerned not only with art, but with the problem of pollution? Are, as Burnham claimed, "all progressive things accomplished with the aid of the system?" Or do things accomplished with the aid of the system merely reify and reinforce it?

Because the public reception of *Software* is difficult to ascertain (in part because of several controversies surrounding the show, ongoing technical difficulties, and other factors) it is unclear to what degree American Motors (AMC) benefited - or suffered - from its association with the exhibition. The New York Times reported that AMC was honored by the New York Board of Trade with an award "for its support of an experimental exhibition, *Software*..."[28] Certainly the automobile manufacturer exhibited remarkable vision in bravely funding a challenging, if not risky, venture. It arguably deserved the award as much as any corporate sponsor. But it also turns out that David Finn, principal of Ruder & Finn, the fine art consulting firm that helped secure funding for, organize, and publicize *Software*, was a member of the board of trustees of both the Jewish Museum and the Business and the Arts Advisory Council of the New York Board of Trade.[29] It is no surprise that in art-business partnerships one hand proverbially washes the other. However, this concrete example does suggest how "the system" benefits as a result of its support of culturally progressive events, aided in part through behind-the-scenes connections.[30]

Indeed, if one agrees with Althusser's theory of interpellation, or Horkheimer and Adorno's theory of the "culture industry," then perhaps things accomplished with the aid of "the system" merely reify and reinforce it.[31] So Toche's critical message might indeed have benefited the sponsor, by making automobile manufacturer appear to be concerned not only with art, but with the problem of pollution. This dilemma plagues the political consequences of art and technology in general. For how can an artist use technology in a way that does not aestheticize it or otherwise reify the elitist social relations of technocracy? Nor is this dilemma unique to art and technology, but rather cuts across many fields of cultural practice, since the sources of funding are rarely made explicit. As Burnham noted, "the esthetic illusion is that as long as artists don't know where the money is coming from, many latently guilty consciences are relieved... [b]ut as you know, every museum ... has money in trusts, war industries..."[32]

For better or worse, not all artists find these contradictions stifling to their work. Ted Victoria, for example, exhibited his *Solar Audio Window Transmission* (1969-70) at the *Software* exhibition, his first New York show. Solar panels powered ten radios, which were connected to contact sound reproducers placed on the windows of the building, turning the Jewish Museum into a giant, faintly audible speaker that could be heard only by placing one's ear very close to or against a window.

In a recent interview, Victoria acknowledged that at the time he was not especially concerned with pollution, or with advocating the use of renewable energy sources.[33] On the contrary, his work was based on the idea of transforming the energy of the sun into information, making the museum itself an active component in the piece, and engaging the audience to interact in new ways with the physical structure of the museum. It stands out as a remarkably subtle and sophisticated use of technology for art, an art that knows its own value and limits, an art that transforms the intangibles of energy, information, and intelligence into visual forms that encourage the reconsideration of conventional categories and relationships.

These varied positions regarding the relationship between art and technology offer insight into the personal and ideological stakes that met and competed at their junction in the 1960s, many of which remain today. Among the many questions that are raised by even this cursory examination, the most compelling and simultaneously the most difficult to answer is: Why did Cage, Rauschenberg, Kluver, Heidegger, Hulten, Latham and Burnham all believe that art possesses special and redemptive powers vis-a-vis technology, even though they could not identify - in

completely rational terms - what that redemptive power might be? Kluver, fully recognizing this quandary, said, "I can make no claims about the importance of the art and technology collaboration. It will not give people food and housing, and it will not stop the war in Viet Nam."[34] Yet he dedicated his life to it.

There is no simple answer to this question, though the following concluding observations may help contextualize it while further problematizing it. Kluver's abhorrance of boredom and dullness may indicate his knowledge as an engineer of how technology constructs and then becomes the vehicle of the instrumentalization of experience. From his collaborations with artists, he also knew that art throws into question the very logic of instrumentality. Ironically, and to complicate matters further, the same year that Kluver organized Nine Evenings, 1966, poet and Fluxus artist Dick Higgins wrote, "Boredom was, until recently, one of the qualities an artist tried most to avoid. Yet today it appears that artists are deliberately trying to make their work boring." Higgins theorized this in an essay entitled "Boredom and Danger" which he concluded by observing that in using boredom as a medium or value, "the intention is more to enrich the experiential world of our spectators, our co-conspirators, by enlargening the repertoire of their overall experience."[35]

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[2] Werner Heisenberg, *Physics and Philosophy: The Revolution in Modern Science* (London: Allen & Unwin, 1959): 161. See also Walker, fn. 24.

[3] Exhibitions included shows at such prestigious institutions as the Museum of Modern Art, Los Angeles County Museum of Art, Corcoran Gallery, Walker Art Center, Nelson Gallery, and the Jewish Museum.

[4] Experiments in Art and Technology, "Trailer Introducing Ten Documentary Films from *9 evenings: theatre & engineering, October 13-23, 1966*." VHS videotape. Author's transcription of Cage's oral statement.

[5] A more thorough investigation of these historical circumstances and their relationship to the application of technology to art during this time in the US comprises a key component of the author's dissertation research.

[6] Billy Kluver, Interview with the author, September 19, 1997. "Tame" was the work he used to describe Cage's position vis-a-vis his own; "enigmatic" is the author's word to describe Kluver's position.

[7] Douglas Davis, "Art and Technology Conversations. Billy Kluver: The Engineer as a Work of

Art." *Art in America* 56:1 (Jan - Feb, 1968): 42.

[8] Interview with Kluver, September 19, 1997.

[9] Davis, "Art and Technology": 42. Kluver maintained this position in the September 19, 1997 interview.

[10] Ibid.

[11] Billy Kluver, "9 evenings: theatre and engineering" (program of performance) 1966, no page numbers.

[12] Interview with Kluver, September 19, 1997.

[13] Robert Rauschenberg and Billy Kluver, (untitled) E.A.T. News 1:3 (November 1, 1967): 5. Reproduced in all- caps, as it originally appeared.

[14] Jasia Reichardt, "E.A.T. and after" *Studio International* 175:900 (May, 68): 237.

[15] The show later traveled to the San Francisco Museum of Modern Art, and the Institute for the Arts at Rice University, Houston, Texas.

[16] Hulten wanted approximately ten such works. The response was so enthusiastic, resulting in 137 submissions, that E.A.T. organized an independent exhibition, *Some More Beginnings*, which was shown at the Brooklyn Museum of Art concurrently with *Machine as Seen*. See Experiments in Art and Technology, *Some More Beginnings*. New York: Experiments in Art and Technology, Inc., 1968.

[17] K.G. Pontus Hulten, *The Machine as Seen at the End of the Machine Age*, (New York: Museum of Modern Art, 1968): 13. Unless otherwise noted all other quotes are from this page of the catalog.

[18] Martin Heidegger, "The Question Concerning Technology," *Basic Writings*, David Farrell Krell, Ed. (New York: HarperCollins, 1977,1993): 332-3.

[19] Heidegger's move bears similarity to Marx's theory that historical economic systems contain the seeds of revolution that ultimately did, or would, overthrow them. Moreover, by blaming the loss of human control over technology on a perverse and pervasive system of knowledge, Heidegger, a Nazi sympathizer, might allay German guilt over the holocaust. At the same time, given the elevation of art to the quasi-spiritual level of philosophy and religion in the German philosophical tradition of Kant and Hegel, Heidegger could have faith in art when there was little else in which to believe.

[20] See John A. Walker, *John Latham: The incidental person - his art and ideas*. Middlesex: Middlesex University Press, 1995. See especially pp. 97-101 on APG. The quote from Heisenberg is also cited in Walker's text, p. 19.

[21] See my "The House that Jack Built: Jack Burnham's Concept of 'Software' as a Metaphor for Art" in *Leonardo Electronic Almanac 6:10 (November, 1998)*.

[22] Grace Glueck, "Art Notes: The Cast is a Flock of Hat Blocks," *New York Times*, December

21, 1969.

[23] Ibid.

[24] Ibid.

[25] Willoughby Sharp, "Willoughby Sharp Interviews Jack Burnham," *Arts* 45:2 (Nov., 1970): 21. Sharp, who had organized several exhibitions of, and written about, kinetic, air, and light art, might have disagreed. Along with Liza Behr and John Perrault, he accompanied artist Takis to MOMA on January 4, 1969, and removed the Greek artist's work from Hulten's *The Machine* exhibition. The new works the museum had promised to show were not included, but instead - and without Takis' consent - MOMA displayed an older work from its collection. This act of resistance led to the formation of the Art Worker's Coalition. Author's interview with Willoughby Sharp, October 1, 1997. The Takis work exhibited, *Tele-Sculpture* (1960) was donated by John and Dominique de Menil, who played an important role in bringing *The Machine* to Houston. See fn. 15.

[26] Maurice Tuchman, *A Report on the Art and Technology Program at the Los Angeles County Museum of Art: 1967-1971* (Los Angeles: Los Angeles County Museum of Art): 17. My emphasis.

[27] For example, Oyvind Fahlstrom's performance *Kisses Sweeter than Wine* at *Nine Evenings* and Carolee Schneemann's performance *Snows* that E.A.T. engineered at the Martinique Theater (1967) both incorporated relatively complex technology, in artistic protests against the war in Viet Nam.

[28] George Gent, "Board of Trade Honors Businesses' Aid to Arts," *New York Times*, November 20, 1970.

[29] I discovered Finn's association both with the Jewish Museum and the New York Board of Trade while working in the archives of the Jewish Museum.

[30] It is arguable that museums benefit from the acclaim received by their corporate patrons for supporting culture, increasing the likelihood of further support. In this light, David Finn succeeded at helping both the Jewish Museum and American Motors achieve their individual goals. But this "win-win" scenario is muddied by the burden of association that particular corporate sponsors bring to bear on works of art exhibited under their aegis. In other words, just as a corporation's public image is affected by its association with the arts, so the reception and meaning of an artwork is not separable from the institutional context - including the sponsorship - in which it appears. By bringing this association into the gallery, the museum influences the interpretive context for its exhibitions. Toche was keenly aware of this problem.

[31] See Louis Althusser, "Ideology and Ideologi cal State Apparatuses," in Louis Althusser, *Lenin and Philosophy and Other Essays*, trans. Ben Brewster (New York: Monthly Review Press, 1971); Max Horkheimer and Theodor W. Adorno, "The Culture Industry: Enlightenment and Mass Deception," in Max Horkheimer and Theodor Adorno, *Dialectic of Enlightenment*, John Cumming, trans., (New York: Continuum Publishing, 1993, c. 1944): 120-167.

[32] Willoughby Sharp, "Willoughby Sharp Interviews Jack Burnham," *Arts* 45:2 (Nov., 1970): 21

[33] Ted Victoria, Interview with the author, September 23, 1997. This work grew out of the artist's earlier experiments with solar energy, c. 1964-5, when popular awareness of environmental

issues was substantially less prevalent.

[34] Davis, 42.

[35] Dick Higgins. *foew&ombwhnw*: a grammar of the ind and a phenomenology of love and a sicence of the arts as seen by a stalker of the wild mushroom. (New York: Something Else Press, Inc., 1969): 123.

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